

REMARKS

Claims 1-3, 5-8, 10, 12-13, 15-16 and 19-24 were rejected under 35 USC § 102(e) as being anticipated by Sharp et al., (US Patent No. 5,999,240). This rejection is vigorously traversed. In the Applicant's last response (July 28, 2003) to the office action of May 8, 2003, the independent claims (claims 1, 17, 19 and 23) were amended to clarify that the polarization rotating element was proximate to an exterior surface of the polarized display panel. In addition, the Applicant also pointed out that a mere variable retarder is not the same as a "polarized display panel" as described in the specification. While the Examiner is no longer citing that same reference, he has found a new reference, which differs from the presently claimed invention in the same way as the previously cited reference. These differences are set out below and also in the attached affidavit of Brent Larson.

Sharp (US Patent 5,999,240), Fig. 2a, shows a polarization modulator, 10 (e.g., a liquid crystal cell), with front and rear polarizers, 40 and 50, and polarization rotating elements 20 and 30. Note, however, that the polarization rotating elements are retardation films contained internally to the polarized display device, which consists of all of the elements of Fig. 2a. As specifically explained and argued in the last response to the office action as well as in the affidavit of Brent Larson, a variable retarder (in that case, an active matrix FLC) does not provide polarized display panel functionality on its own. It requires the additional polarizers. In the Applicant's last response, we provided a number of references to the specification to support that definition of "polarized display panel" as used in the present claims.

When including the additional polarizers of Fig 2a with the liquid crystal cell 10, in order to meet the definition of a "polarized display panel", it is crystal clear that the polarization rotating elements 20 and 30 are not proximate to the exterior of the polarized display panel. Rather, they are clearly inside of the

polarized display panel, and thereby quite distinct from applicant's claimed invention. Again, this is referenced in the affidavit of Brent Larson.

Perhaps the examiner failed to recognize that modulator 10 is not a "polarized display panel" due to Sharp's vague use of the term "LCD" in describing modulator 10. The term LCD is typically used in the art to refer to a Liquid Crystal Display, where a display is a device or system capable of displaying information in a manner suitable for viewing. Sharp, however, uses "LCD" more broadly, to the point of being indefinite. See column 11, lines 30-37, "the term LCD is used for any liquid crystal device which contains a liquid crystal cell having one or more pixels". He goes on to provide useful limitations on modulator 10, however, by saying "The LCD is typically a multi pixel array of liquid crystal cells where each pixel can be independently controlled." No mention is made of any polarizers being included with the cells in the LCD, or its ability to modulate any property of light other than polarization. As further evidence that Sharp is using the term LCD to describe a variable retarder or similar polarization modulator, lines 36-37, states that "The retardances of a single pixel of an LCD are labeled in FIG. 2"

Further, it is readily evident to one skilled in the art that the described utility of Sharp's invention in Fig. 2a requires that element 10 function as a polarization modulator, thereby making it distinctly different from the "polarized display panel" of the present invention.

Several other references to modulator 10 support its role as a variable retarder which modulates polarization. Column 7, lines 45-47 states that "Polarization modulator 60 is formed by modulator 10 in combination with retarder stack 20". Using the polarized input light from polarizer 40, and adding polarization analyzer 70, forms a filter (column 7, lines 47-50), which modulates intensity of the light (see column 10, line 47). Note that "analyzer" is a term

often applied to a polarizer, which is used to convert polarization modulation (which is not visible to the eye) into intensity or amplitude modulation.

In the context of Fig. 1, column 7, lines 60-65 teach that light of one polarization is transmitted with a polarization that does not vary with the voltage applied, while light with another polarization is modulated into a different polarization. Column 7, line 66 through column 9, line 15 goes on to describe various types of suitable polarization modulator types, and include the introductory statement "The modulator is a device which controls the state of polarization of transmitted light with the application of a voltage". This is extended to modulator 10 of Fig. 2 in column 10, lines 56-59. In other words, the modulator 10 of Sharp is not a polarized display panel according to the present invention, and therefore does not anticipate any of the claims of the present invention.

Thus, the independent claims differ significantly than the teaching of Sharp et al., and are allowable. The dependent claims are also allowable due to the allowability of the independent claims.

Claim 4 was rejected under 35 USC § 103(a) as being unpatentable over Sharp, et al. (US Patent No. 5,999,240). Claim 4 is a dependent claim and due to the allowability of independent claim 1, this claim is also allowable.

Claims 9, 11, 17-18 were rejected under 35 USC § 103 (a) as being unpatentable over Sharp, et al.('240), in view of Larson ('388). As previously discussed, claim 17 has also been amended to include the feature of "the polarization rotating element being proximate an exterior surface of the polarized display panel". This feature is not taught or implied by either of the cited references and is therefore allowable. Claims 9, 11 and 18 are dependent claims and due to the allowability of the independent claims, they are also allowable.

The Examiner also cited Fergason (US 5,515,186), but incorrectly states that element 16' is a polarization rotating element. To the contrary, element 16' is an analyzer (see column 10, lines 38-39). As pointed out above, an analyzer is a polarizer (evident also from Fergason, compare column 8, line 32 "linear polarizers 14, 16" and column 8, line 67, "analyzer 16").


Having responded to each and every objection and rejection raised by the Examiner, it is believed that the patent application is now in condition for allowance, and such allowance is respectfully requested. If the Examiner has any questions or suggestions for expediting an allowance in this matter, the Examiner is invited to call the undersigned collect.

The Commissioner is authorized to charge any fees or credit any overpayment under 37 CFR §§ 1.16 and 1.17 which may be required during the entire pendency of the application to Deposit Account No. 01-2335.

Respectfully submitted,

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By:


Dennis F. Armijo
Reg. No. 34,116

Dennis F. Armijo, Esq.
c/o HONEYWELL, INC.
Patent Services Group
Post Office Box 2245
Morristown, NJ 07962-2245

Telephone: (505) 839-0123
Facsimile: (505) 839-4017